ARCHITECTURAL ALUMINUM

ALUMINUM COMPANY OF AMERICA

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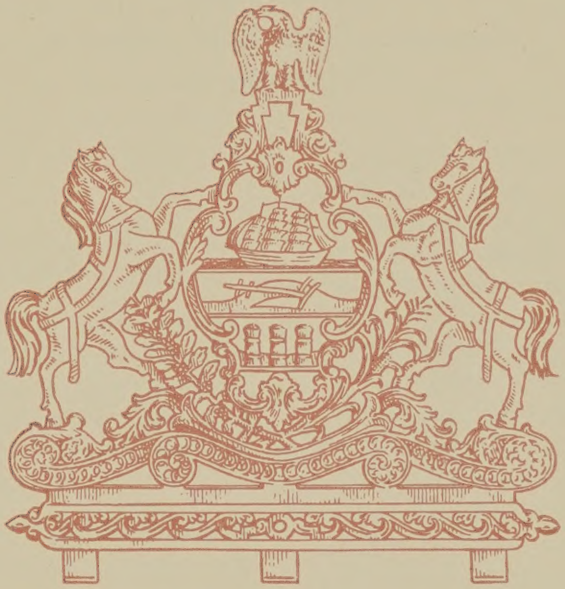
ARCHITECTURAL ALUMINUM



The illustration above is a line drawing from an actual design of cast aluminum. This design appears again in a photograph on page 25 and shows how admirably aluminum lends itself to ornamentation. All designs, no matter how intricate or elaborate, can be executed in aluminum and to the satisfaction of the artist who creates the motif.

ALUMINUM COMPANY OF AMERICA
PITTSBURGH, PENNSYLVANIA

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PITTSBURGH, PA.

ALUMINUM

CAPS THE WASHINGTON MONUMENT

THE WASHINGTON MONUMENT was completed on December 6, 1884, and on its 3300-pound capstone was placed a cap of aluminum. Today, after almost half a century of exposure to all kinds of weather, this cap remains practically as bright and undimmed as the day it was placed.

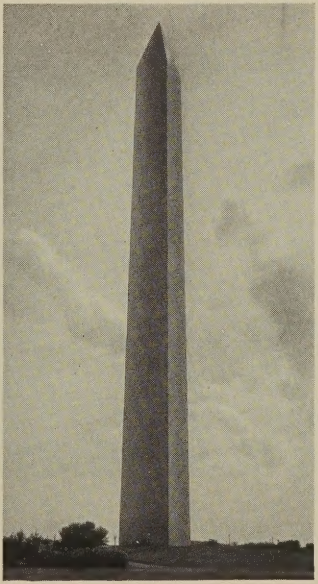
The Washington Post said, in its editorial "leader" on December 7, 1884:

> "The pyramidal roof of the mighty monument to Washington was completed yesterday by securing the capstone in its place and surmounting this with *the bright aluminum apex which is to point starward till the ages end.*"

The following quotation is from a book in the possession of Washington's Committee on Public Parks and Grounds:

> "The 3300-pound capstone is crowned by a small pyramid of aluminum, 5.6 inches at its base, 8.9 inches high, weighing 100 ounces, being the largest piece of this metal ever cast in any country. (1884)"

Recently a casting of aluminum weighing *not 100 ounces but over 3800 pounds* was manufactured. This comparison is more amazing when it is known that this recent casting is not just a slab of aluminum, but a casting for a Diesel Engine.



An interesting function of the metal cap is described in the Evening Star of Washington, D. C., issue of February 21st, 1928, as follows:

"The Star on the Monument"

> "Spring has come. The light shines from the aluminum tip on the Monument in the morning. This is a sure sign. When the untarnished surface of the metal cap at the peak of the great shaft catches the rays of the sun, no matter how cold the weather may be, it is a token that winter is past. This phenomenon of the gleaming cap of the Monument is a semi-annual occurrence, in early spring and early autumn. The aluminum never loses its luster, and it catches the morning rays like a mirror. There is no more beautiful spectacle in America than this blazing star on the peak of the great structure erected in honor of George Washington. . . . ."

This incident is interesting, not alone in itself, but from the standpoint of showing the manner in which the ravages of the elements are withstood by aluminum and its alloys. It is the permanency of aluminum, its defiance of the elements, that makes it the ideal architectural metal. It is light, strong; will not corrode; is easy to form and work; and will not stain.

THE AGE OF ALUMINUM

Much public interest is being displayed in this modern metal, partly because it is playing such a great part in Aviation's coming of age. All-aluminum *airplanes* are being constructed with consequent gain in safety and strength; *dirigibles* are to be sheathed with the metal.

Aluminum is being used extensively by manufacturers of *motor cars* and *trucks*. Aluminum alloy castings are used for crank-cases, oil pans, transmission covers and cases, brake drums and brake shoes, pistons, radiator shells, and in numerous other places to reduce weight.

Connecting rods of *locomotives* have been made of it. *Railway passenger coaches*, *busses*, and *trolley cars* employ aluminum in their construction.

Strength and enduring service need not be sacrificed in gaining the tremendous advantage of aluminum.

It would take pages to relate all the uses to which aluminum is being put in the modern industrial world. Scientists and progressive business men in every field are applying it to their discoveries and products.

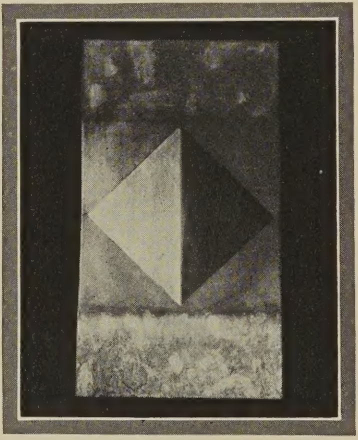
Architects, fabricators, and contractors who have analyzed the qualifications of the metal are eagerly taking it up for their purposes.

Scientific Investigation of 27-Year Old Aluminum Casting

Fourteen sets of ornamental castings were placed on the Frick Building, Pittsburgh, Pa., in 1901. Recently one was removed and submitted to a scientific investigation. This casting, unprotected by paint or other means, had been exposed to all kinds of weather conditions—sun, rain, sleet, snow, and ice.

The metallographic examination demonstrated beyond the shadow of any reasonable doubt that aluminum architectural castings will last as long as any building on which they are placed. The photograph of the top side of the casting is shown on this page, and it is to be seen that twenty-seven years of weathering had no appreciable deteriorating effect on the aluminum.

The result of this metallographic examination went a long way in satisfying the Building Board of the University of Pittsburgh that aluminum castings would withstand the ravages of the elements. Aluminum spandrels have been specified for the University of Pittsburgh's 37-story "Cathedral of Learning."



Aluminum casting recently removed from the Frick Building, Pittsburgh, Pa., in order to ascertain the effect of 27 years of weathering upon it.

THE ARCHITECTURAL METAL

ALUMINUM possesses many characteristics that recommend its use in the architectural field. Among these noteworthy qualities may be mentioned light weight, strength, resistance to corrosion, easy workability, and the fact that it will not stain adjacent surfaces.

Aluminum, the modern architectural metal, may be cast, rolled, extruded, drawn, or fabricated from sheet, into many forms and strictly to specifications of designers and architects. For example:

- Balustrades
- Columns
- Conduit
- Coping Tiles
- Cornices
- Cresting
- Doors
- Down Spouts and Gutters
- Entrances, Window Frames, and Sashes
- Fascias
- Frames and Pendants
- Grille Work
- Lamp Standards
- Marquises
- Newels
- Ornamental Fences
- Panels
- Pilasters
- Radiators and Covers
- Risers and Treads
- Saddles
- Scuppers
- Sheet Roofing
- Shingles
- Skylight Frames
- Spandrels
- Stair Railings
- Statuary
- Store Front Work and Facing
- Ventilators

Non-Staining Aluminum Spandrels Resist Corrosion

Are Light, Strong, Enduring

OUTSTANDING among the many qualities of Aluminum is the resistance of the metal to corrosion. In view of this characteristic, spandrels made of aluminum require no painting to preserve them.

Save Painting Costs

The saving of painting costs is often a great economy. For example, the budget for a New York building contains an item of $3000 per year for preserving and protecting the spandrels with paint. This money could be saved through the use of *aluminum* spandrels.

Paint Obliterates Design

Repeated painting fills up fine detail work which, in a few years, will be lost to sight.

Since, in most cases, spandrels are highly ornamental, this is a matter of importance.

Fine detail and delicate ornamentation can be brought out in aluminum more readily and will remain—because low points will never be filled in with paint. Aluminum spandrels require no painting.

Erection Easier and Costs Less

Aluminum spandrels are very ductile, thanks to the unique characteristics of this *modern* metal.

This ductility makes erection simpler—it eliminates a number of difficulties encountered in erecting spandrels made of other metals. Aluminum spandrels can be fitted easily to the little irregularities in stone work, whereas brittle metals, such as those of which ordinary spandrels are made, break easily.

The light weight of aluminum is another reason why the erection of Aluminum spandrels is easier and costs less.

Elaborate Designs Possible

All designs, no matter how intricate or elaborate, can be executed in aluminum and to the satisfaction of the artist who creates the motif.

It is a metal that lends itself admirably to ornamentation. Other metals or combinations of metals used in manufacturing spandrels place a very definite limit on the type of design that can be employed.

To the architect, who searches for practical materials in which to render his artistic visualizations, this quality alone should predispose him in favor of aluminum.

Aluminum Will Not Stain

This should appeal to the architect whose interest in the beauty of his work does not die at its completion. Aluminum does not form the colored salts which, when dissolved by the rain, are washed and blown onto adjacent surfaces—staining and streaking marble; blotching stucco, terra cotta stone, light-colored brick; spoiling the beauty of the structures. Aluminum will not—cannot stain.

Aluminum Will Not Crack

When aluminum expands or contracts, it returns undistorted to its original dimensions. Certain other spandrels made by wedding two materials expand and contract at different rates with each rise and fall in temperature. This tends to pull the two metals apart and distort the spandrels. In time such spandrels will crack. Aluminum spandrels will not crack because they are of one metal which contracts evenly after each expansion; returns to its original shape and dimension.

Aluminum Spandrels Have no Coating to Come Off

Aluminum spandrels are uncoated. They are of one metal, aluminum alloy—corrosion-resisting, non-staining, light and strong throughout. This is a big advantage. Coated spandrels are similar to any other plated part in that the coating gradually wears off and leaves the original metal exposed, reducing the life of the spandrel.

Economical, Because Light in Weight

Aluminum is the lightest in weight of the commonly used metals. For this reason it is obvious that aluminum spandrels are lighter than other spandrels. As a result, the cost of erection is decreased and a considerable saving effected.

As a case in point, two men are able to handle a 5′ x 6′ casting of aluminum, whereas an identical casting of any of the other metals commonly used would necessitate additional men and tackle.

For Satisfactory Results The Right Alloy Must be Specified

To obtain absolutely satisfactory Architectural Aluminum, specify Alcoa Aluminum Casting Alloys manufactured by Aluminum Company of America.

The company's technical staff exercises the most rigid scientific control over every process in the production of Alcoa Aluminum—from the mining of bauxite ore in its own mines to the production of strong alloys and fabricated shapes.

This close technical supervision has produced metal of such high qualities and alloys of such uniformity that the name "Alcoa" has come to be a symbol of the highest metallurgical excellence.

Much research and experimentation preceded the adoption of our No. 43 Alcoa Alloy for architectural castings. This is an alloy that has been used extensively in other fields where resistance to the elements is required. Specify it.

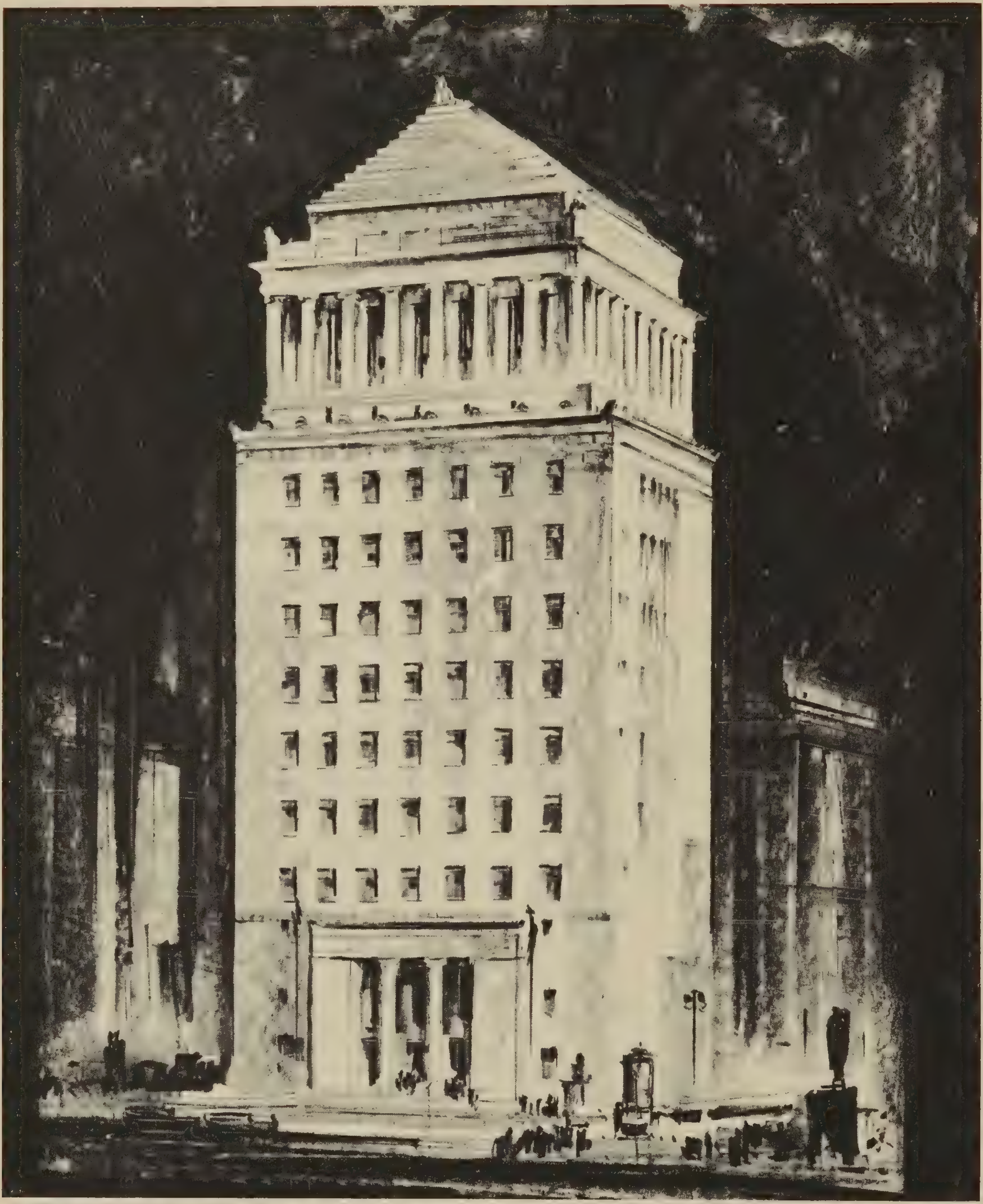
However, where Aluminum will be required to support not only its own weight but that of adjacent surfaces, the Alcoa Alloy No. 195 HT should be specified. This alloy develops greater strength and is practically immune to the weakening effect of corrosion.

Estimates and Co-operative Service

Aluminum Company of America offers full co-operation in determining the suitability of aluminum for these various uses, and a representative will be sent at any time to consult with architects or fabricators. Please feel free to call this representative into consultation.

PORTFOLIO
OF
ARCHITECTURAL
ALUMINUM
INSTALLATIONS

In the following section are illustrated and described a few of the outstanding achievements in architectural aluminum. What has been accomplished and what will be achieved in the field are merely indicated by the examples presented.



Two ancient sphinxes have been reproduced in aluminum and form the cap sheaf and crowning ornament of the new Civil Court House in St. Louis. This marks the revival of an old note in architecture.

ST. LOUIS CIVIL COURTHOUSE

ST. LOUIS, MO.

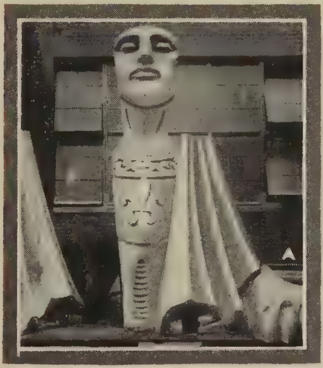
The steps of the pyramid which forms the roof of the St. Louis Civil Courthouse are covered with sheet aluminum. A cast aluminum fascia rises above the top step of the platform—on this rest two cast aluminum sphinxes. Aluminum conduit is used in a system of floodlighting which illuminates these sphinxes.

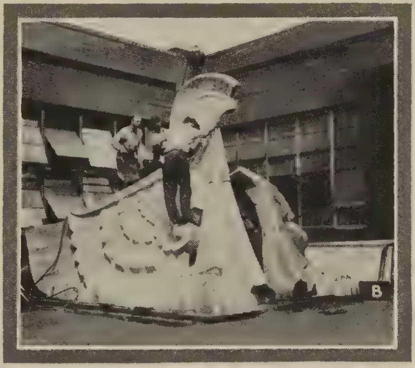
The Plaza Commission, Inc., was responsible for the erection of this structure, and it is made up as follows:

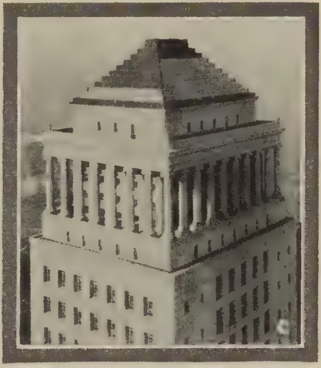
Mr. John Lawrence Mauran, *President*
Mr William B Ittner, *Vice President*
Mr. Preston J. Bradshaw, *2nd Vice President*
Mr. Louis LaBeaume, *Secretary*
Mr. Earnest C. Klipstein, *Treasurer*

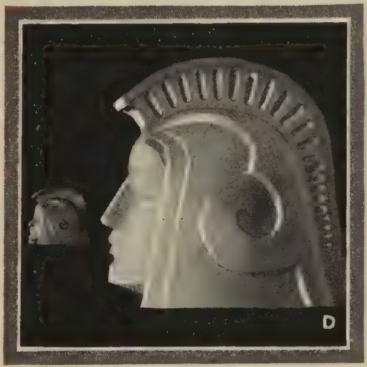
The Member Group, working under the direction of the Plaza Commission, Inc., are:

George D. Barnett, Inc., *Architect*
T. P. Barnett Company, *Architect*
Preston J. Bradshaw, *Architect*
Brussel & Viterbo, *Engineers*
Helfensteller, Hirsch & Watson, *Architects*
William B. Ittner, *Architect*
Klipstein & Rathmann, *Architects*
LaBeaume & Klein, *Architects*
Mauran, Russel and Crowell, *Architects*
Frederick C. Taxis, *Engineer*









ST. LOUIS CIVIL COURTHOUSE
DETAILS

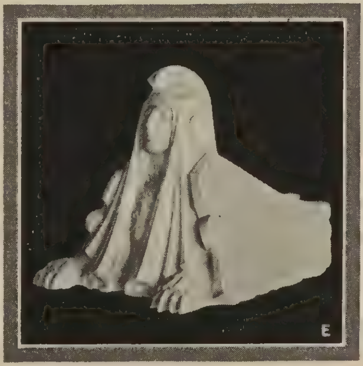
A–Partial assembly of cast aluminum sphinx.

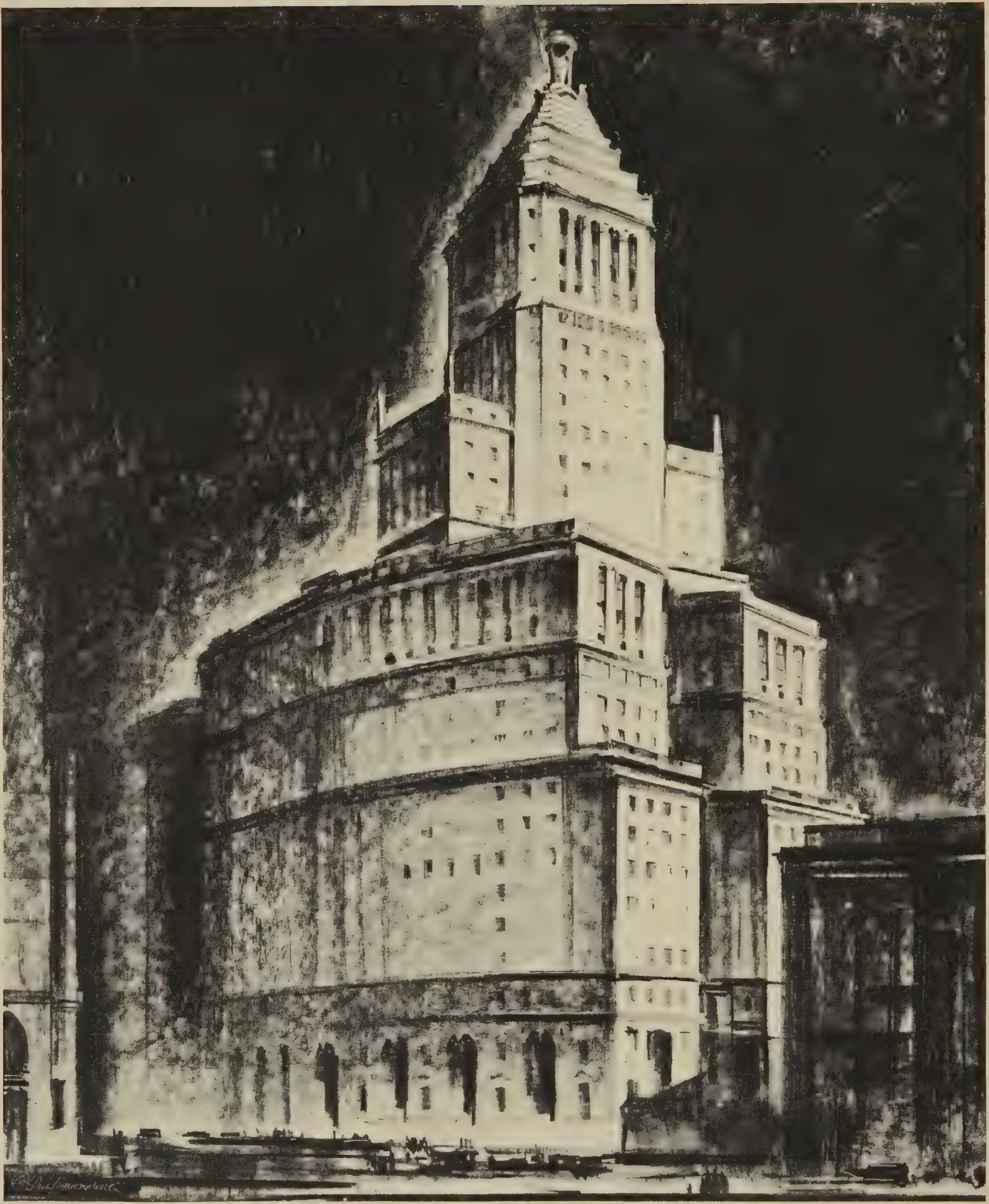
B–Workmen shop-assembling the sphinx.

C–Showing temple-like upper section of courthouse—steps in process of being covered with aluminum sheet roofing—the two sphinxes will repose on top platform.

D–Full size and quarter-size views, plaster cast of head.

E–Completed plaster model.





Architects—Carrere & Hastings, Shreve & Lamb
Contractors—Henry Bonnard Bronze Company

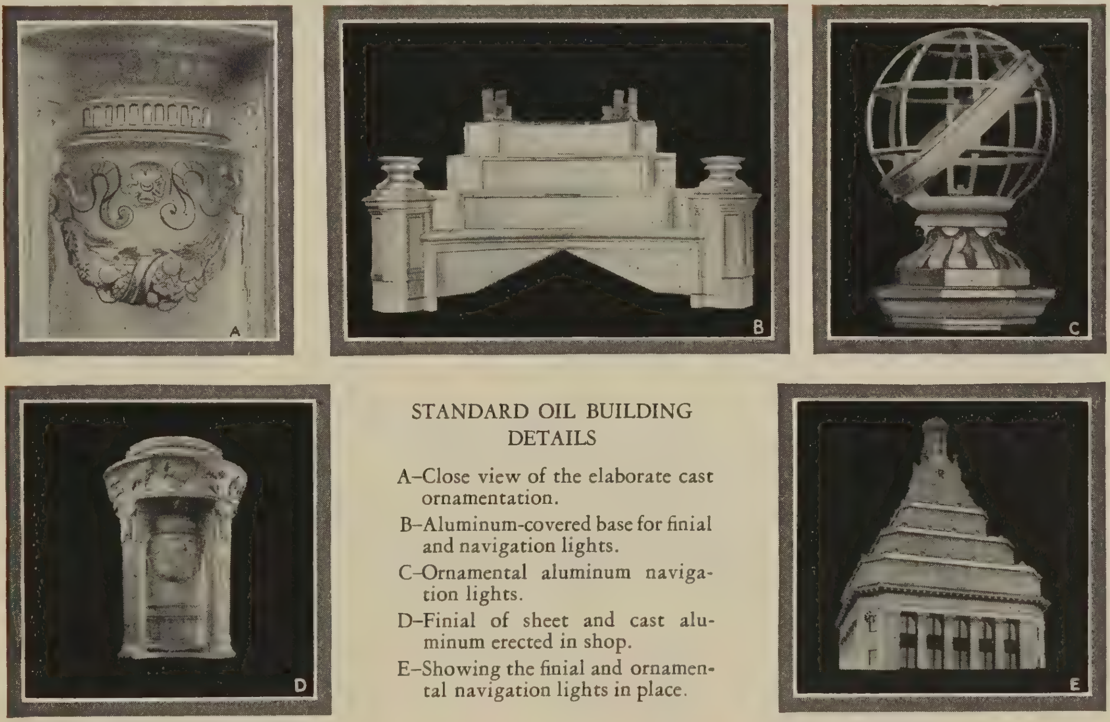
THE STANDARD OIL BUILDING

NEW YORK CITY

THE FINIAL adorning the Standard Oil Building in New York is an elaborate conception in aluminum. It is one of the most highly decorative specimens of architectural aluminum yet produced and is, therefore, a wonderful example of what *can be done* with this metal in the way of ornamentation.

There went into the construction of this finial one hundred and sixty aluminum castings, the largest of these weighing eighty-five pounds. There was used also a large amount of sheet aluminum. Erection was accomplished without the use of hoists or a derrick of any sort.

This finial gives an idea of the range of ornamentation that may be employed in embellishing aluminum architectural castings. No matter how elaborate the design, the artist who conceives it will be satisfied with the execution, in aluminum, of his motif.



STANDARD OIL BUILDING
DETAILS

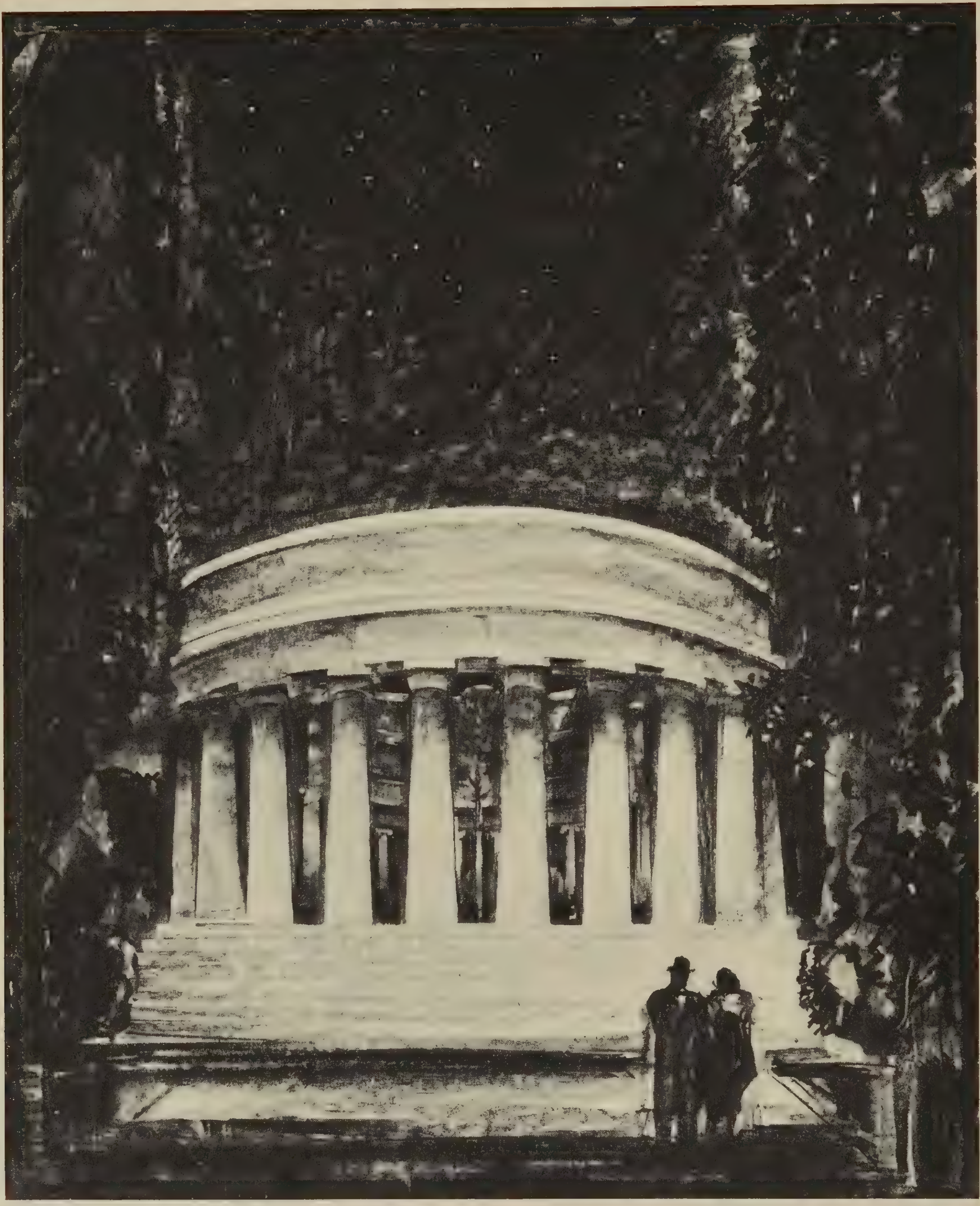
A–Close view of the elaborate cast ornamentation.

B–Aluminum-covered base for finial and navigation lights.

C–Ornamental aluminum navigation lights.

D–Finial of sheet and cast aluminum erected in shop.

E–Showing the finial and ornamental navigation lights in place.



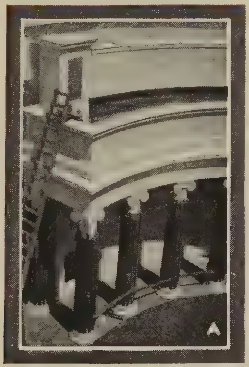
Architects—Henry Hornbostel and Eric Fisher Wood, Pittsburgh
Contractors—E. Elford & Son, Columbus, O.

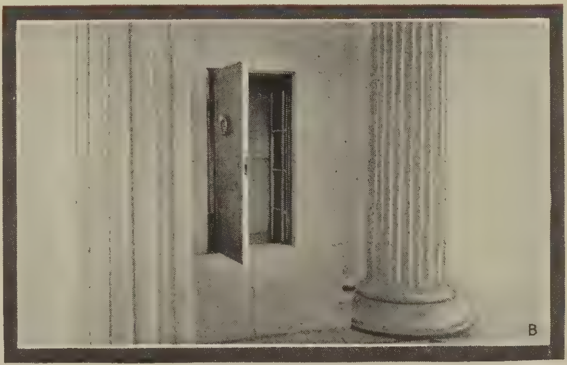
WARREN G. HARDING MEMORIAL

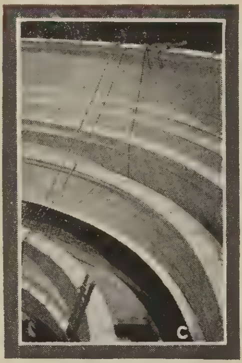
MARION, OHIO

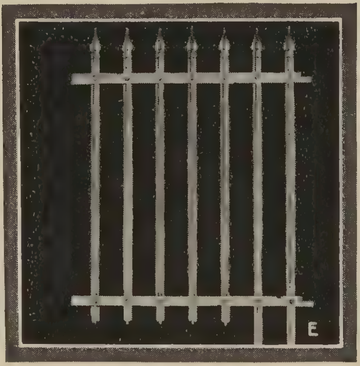
Three hundred and fifty separate castings of aluminum are used on the Warren G. Harding Memorial at Marion, Ohio. These total in weight 12,000 pounds. Included in the castings are many aluminum tiles for the coping. These tiles average in weight about fifty pounds each. Other items of aluminum include aluminum doors and door frames, an aluminum ladder, and the braces for a huge semi-circular flower trough which itself is constructed of sheet aluminum. Pieces of aluminum serve as anchors to hold the marble courses together. An aluminum picket fence guards the entrance to the Memorial.

The architect sought a metal for use as coping tiles and a survey of the metals available led to the choice of aluminum because it does not form colored salts that stain light materials—the Memorial being of white marble, this was an important consideration. The light weight of aluminum was another point in its favor.









HARDING MEMORIAL DETAILS

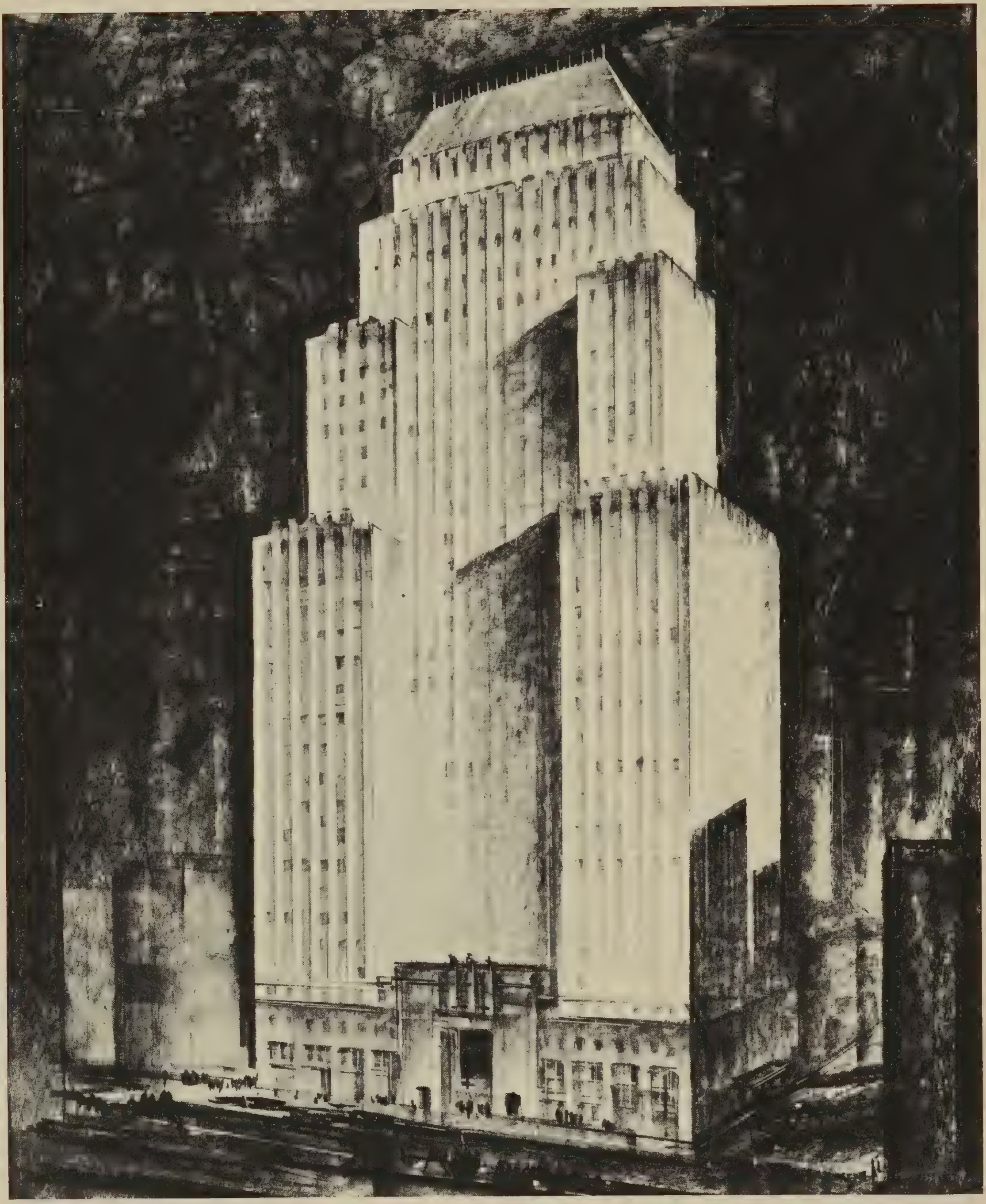
A–Cast aluminum door and coping tiles.

B–Close-up view of door open, showing aluminum ladder inside.

C–Aluminum coping tiles.

D–Cast aluminum handrail.

E–Portion of picket fence of extruded aluminum.



Architects—Graham, Anderson, Probst & White, Chicago, Ill. *Associate Architect*—E. P. Mellon. *Erecting Contractors*—Rust Engineering Company, Mellon-Stuart Company, P. Larsen Company

THE KOPPERS BUILDING

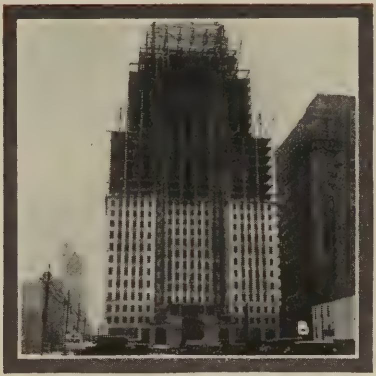
PITTSBURGH, PA.

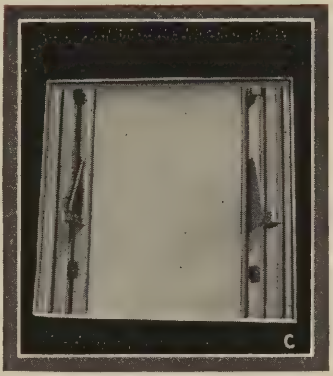
Extensive use is made of the new architectural metal—aluminum—in the Koppers Building, Pittsburgh, a fine example of modern architecture. This building will house the general offices of the Koppers Company, additional tenant offices, and shops. It is a 37-story building of the step-back type.

One hundred and five thousand pounds of aluminum sand castings in the form of decorative spandrels are to be found in this building. The Koppers Building being constructed of white stone, aluminum spandrels were chosen because they will not rust or form those colored salts that soon mar the beauty of white materials.

The light weight of the aluminum spandrels resulted in decreased erection costs because fewer men and tackle were required to handle them.

And, despite the many incomparable advantages, aluminum spandrels themselves cost very little more than those made of ordinary metals.





KOPPERS BUILDING
DETAILS

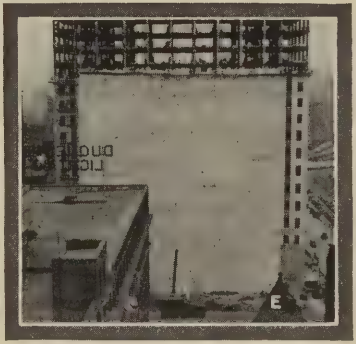
A–View of spandrel casting.

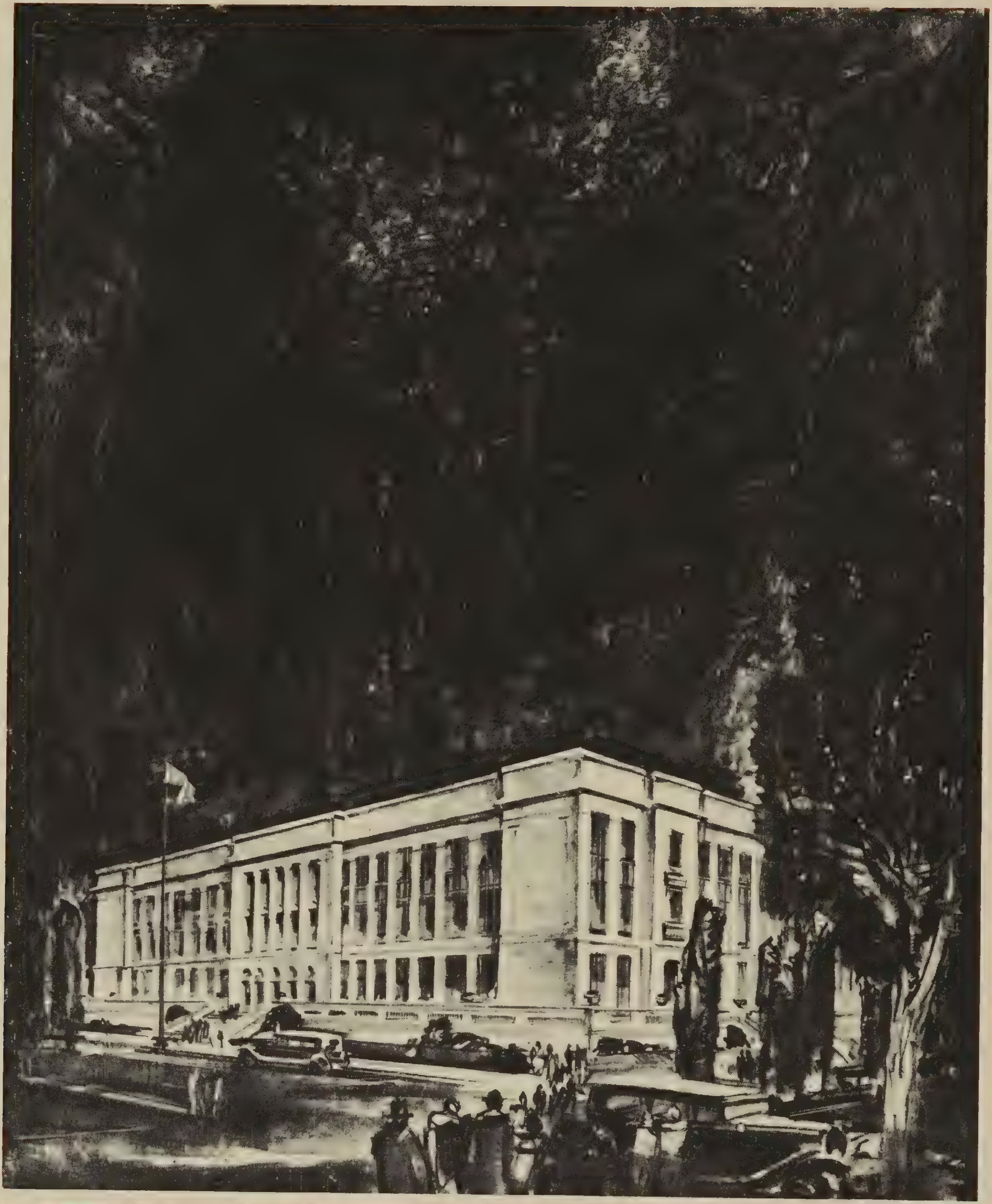
B–Spandrels in place on uncompleted building.

C–Rear of spandrel casting showing anchors attached.

D–Rear of erected spandrel.

E–Rear view of uncompleted building.





Mr. F. H. Hogan, *Director of Schools*. Mr. G. M. Hopkinson, *Architect*. The W. J. Schirmer Company, *Contractors*. Republic Structural Iron Co., *Contractors*.

THE JOHN HAY HIGH SCHOOL

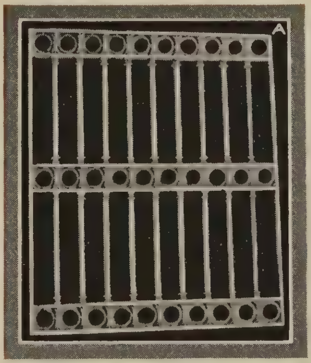
CLEVELAND, OHIO

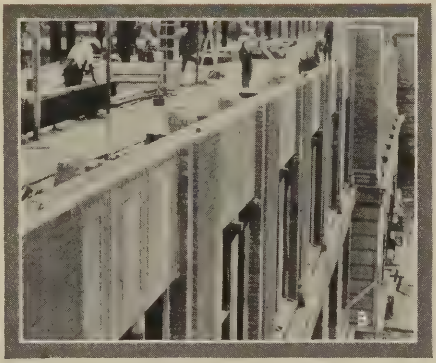
THE JOHN HAY HIGH SCHOOL, a modern senior high school at Cleveland, Ohio, shows an exemplary usage of the modern architectural metal—aluminum.

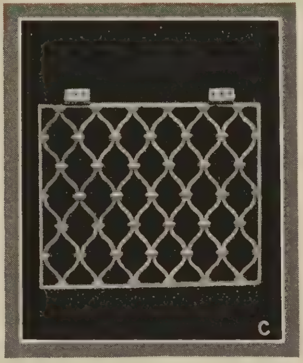
Decorative spandrels for this building required 13,282 pounds of aluminum sand castings. Five large and two small exterior grilles required 764 pounds of aluminum rolled bar and 510 pounds of aluminum castings.

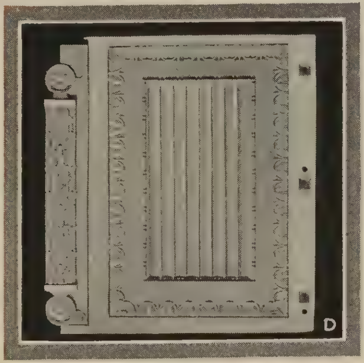
Aluminum spandrels were chosen for decorative work on the exterior of this building because of the fact that aluminum resists corrosion and does not form colored salts that would streak the light-colored surface of the building.

The fact that aluminum is ductile and permits local yielding was another reason why it was chosen. Light weight was an important factor in that it made erection easier.









JOHN HAY COMMERCIAL HIGH SCHOOL DETAILS

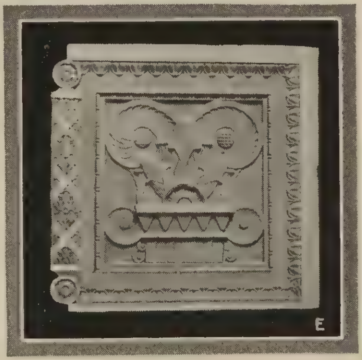
A–Window grille—combination of wrought aluminum bar and aluminum castings.

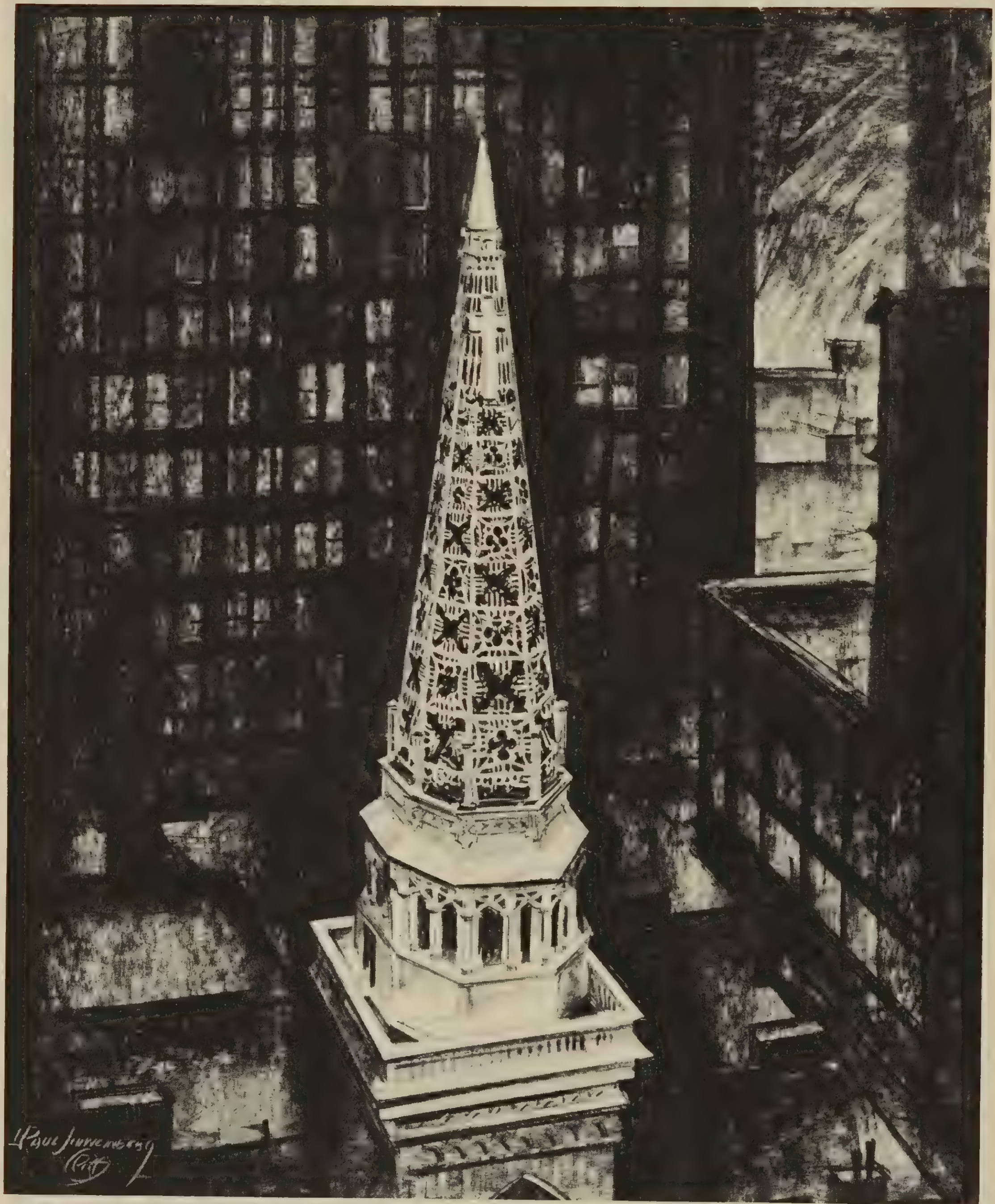
B–Showing spandrels in place.

C–Window grille of wrought aluminum bar and aluminum castings.

D–Cast aluminum spandrel.

E–Highly decorative cast aluminum spandrel.





Architect—Henry Hornbostel. *Contractors*—McClintic-Marshall Construction Co., S. M. Siesel Company

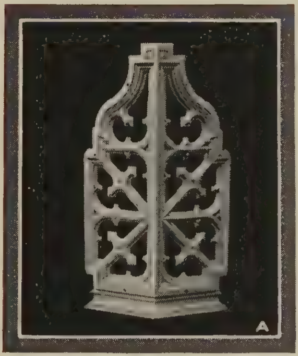
THE GERMAN EVANGELICAL PROTESTANT CHURCH

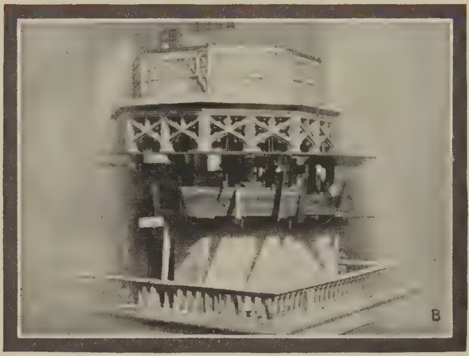
PITTSBURGH, PA.

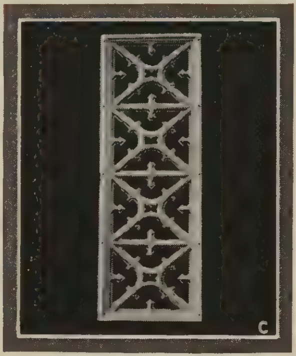
One of the best illustrations of the use of aluminum castings for ornamental architectural decoration is the spire for this church. It is of modern French Gothic style, and was designed by Henry Hornbostel, Architect.

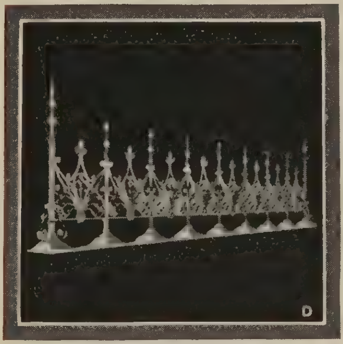
A total of 221 castings are used in this striking edifice which towers 259 feet above the street level. The spire is octagonal, 80 feet in height, and rests on a concrete base 179 feet above the street. The crosses on four sides are of aluminum and are illuminated at night. The extreme tip of the spire is a single casting weighing 201 pounds. Besides the spire, a cresting, on the roof of the church, is of aluminum.

Other uses of aluminum include sheets for the hips, gutters, flashings, and for the roof of the small tower situated to the right of the spire.









GERMAN
EVANGELICAL CHURCH
DETAILS

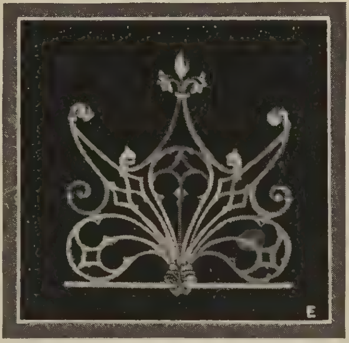
A–Cast aluminum banding corner of church steeple.

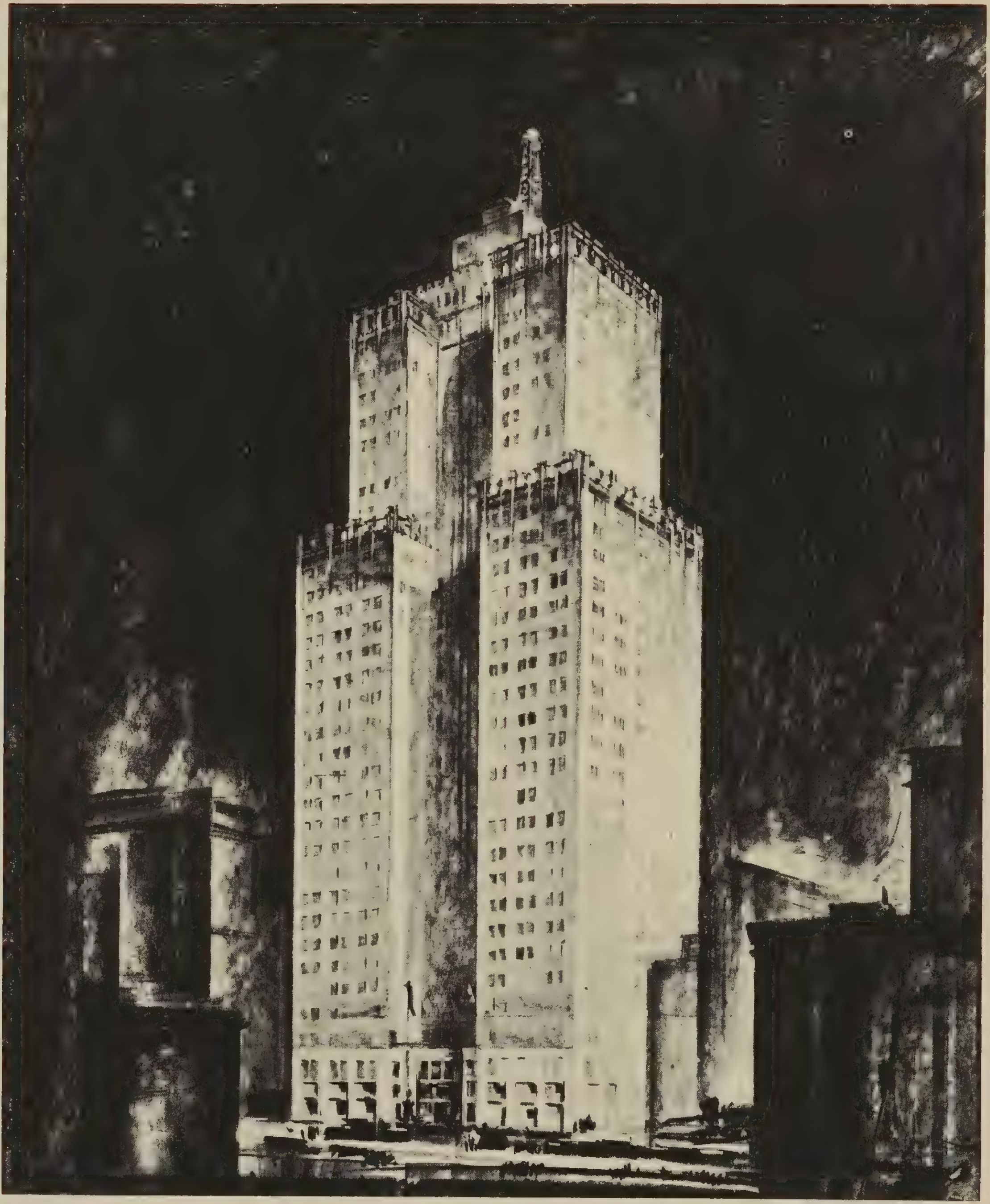
B–Completed assembly of cast aluminum banding.

C–Panel for banding church steeple.

D–Cast aluminum cresting on roof of church.

E–Panel for the cresting.





Architect—Henry Hornbostel, Pittsburgh
Contractors—Thompson-Starrett Co., New York City

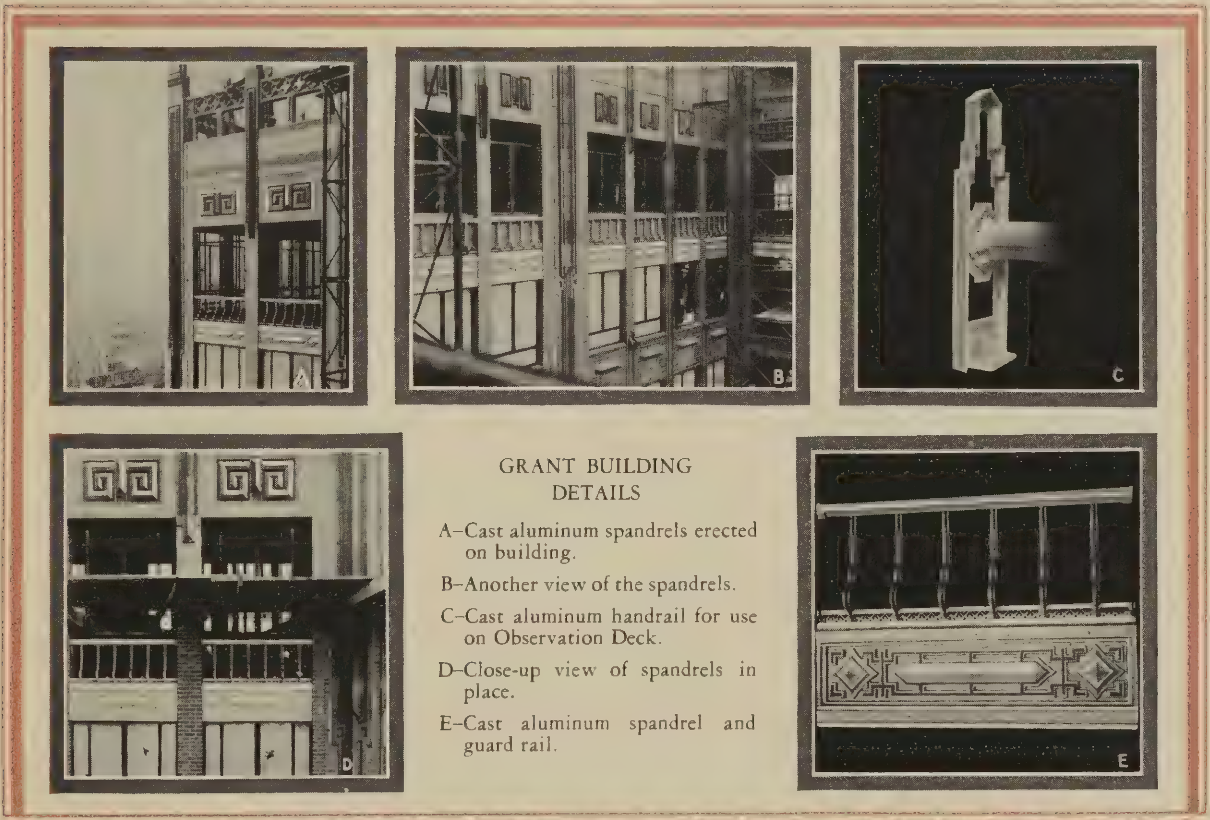
GRANT BUILDING

PITTSBURGH, PA.

This is a 37-story, modern office building erected by the Grant Building Company for the tenancy of shops and business offices.

About 12,000 lbs. of aluminum in the form of sand castings and sheet have been used. These castings consist of spandrels and ornamental window guards on the 34th floor, and an ornamental guard railing for the observation deck which is situated on the 37th floor, and the penthouse is covered with aluminum sheet.

An outstanding quality of aluminum is its ability after each expansion, to return undistorted to its original dimensions. It is an elastic metal. It will never crack from these minute expansions. Other spandrels made of two metals will crack eventually because no two metals have the same coefficient of expansion—they expand and contract at different rates, and this tends to pull the metals apart.



GRANT BUILDING
DETAILS

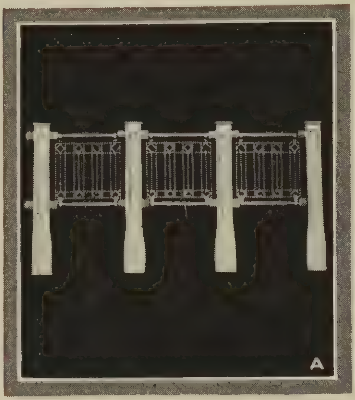
A–Cast aluminum spandrels erected on building.

B–Another view of the spandrels.

C–Cast aluminum handrail for use on Observation Deck.

D–Close-up view of spandrels in place.

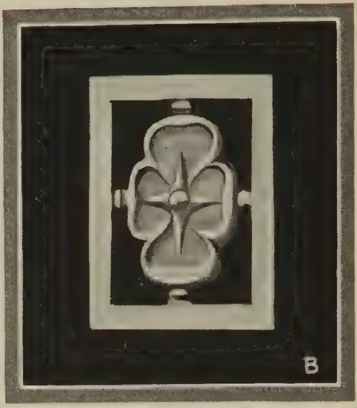
E–Cast aluminum spandrel and guard rail.

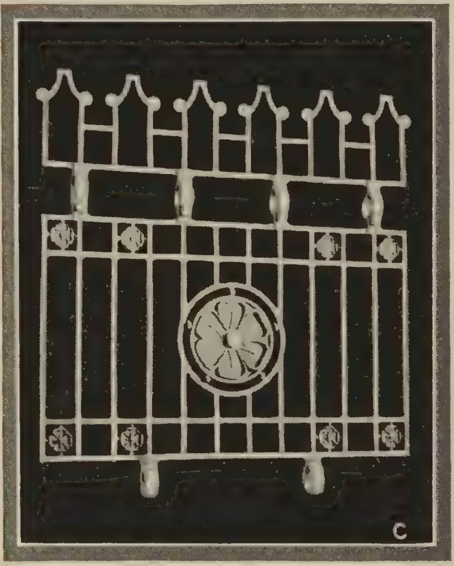


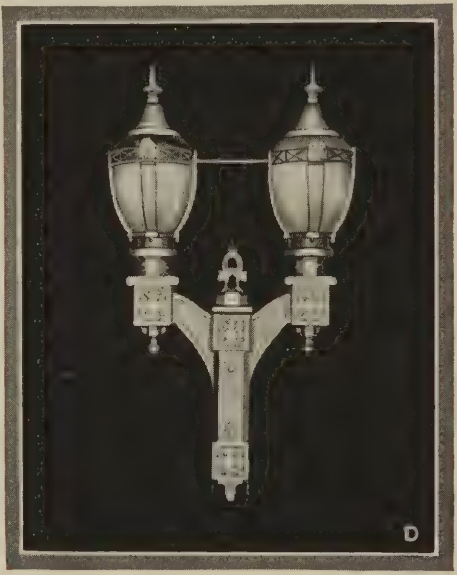
A–Cast aluminum bridge railing used on various bridges in Chicago.

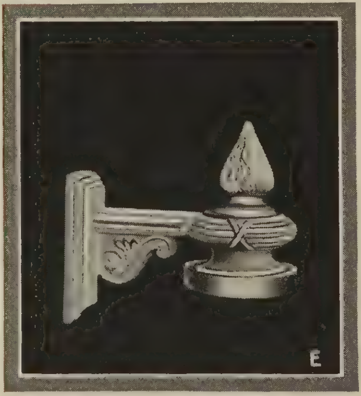
B–Close view of floral ornament in bridge railing.

C–Panel for cast aluminum bridge railing.





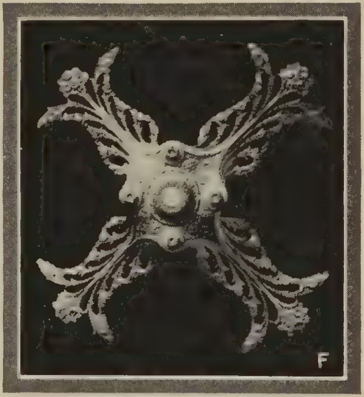


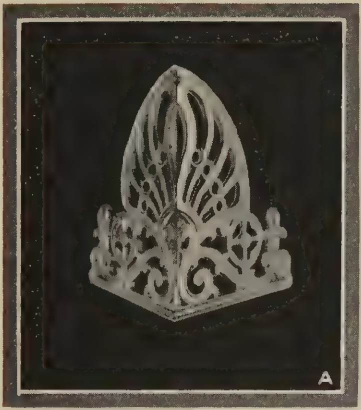


D–Double light standard cast of aluminum for City of St. Louis.

E–Cast aluminum lighting fixture.

F–Cast aluminum lighting fixture.

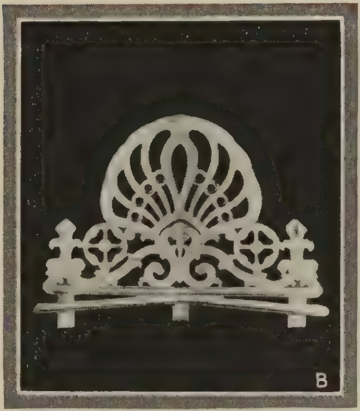


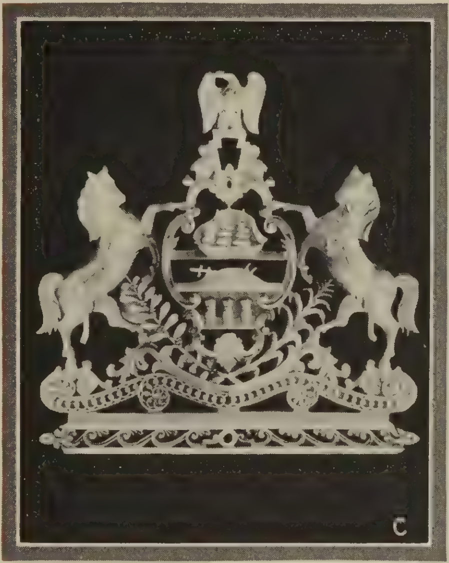


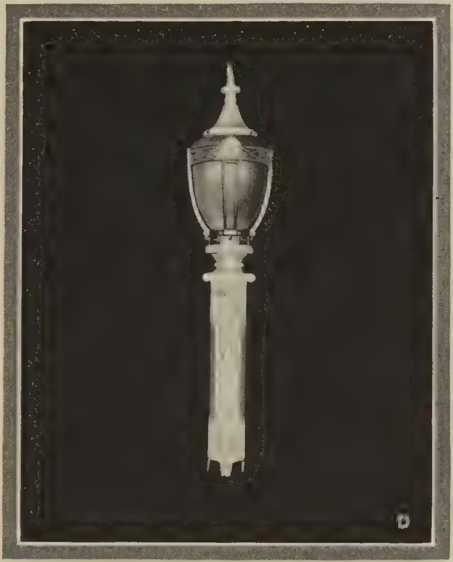
A–Cast aluminum ornament.

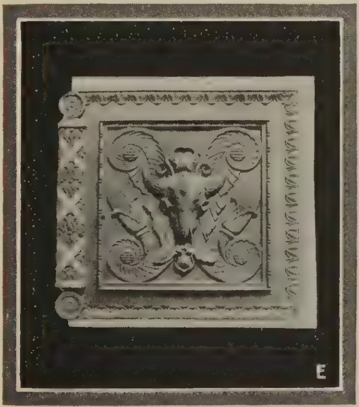
B–Cast aluminum ornament.

C–Decorative ornament on Harrisburg High School, Harrisburg, Pa.





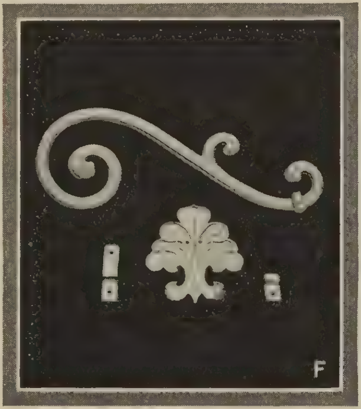


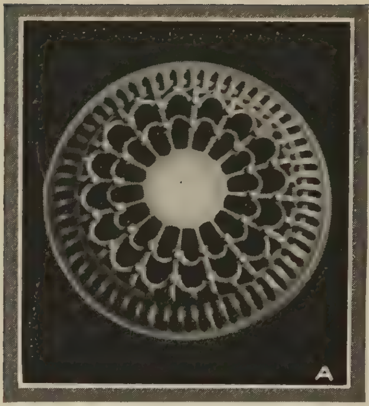


D–Cast aluminum light standard, City of St. Louis.

E–Highly ornamental cast aluminum spandrel.

F–Cast aluminum ornaments used in German Evangelical Church installation.

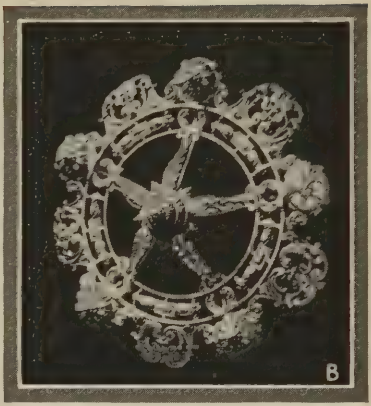


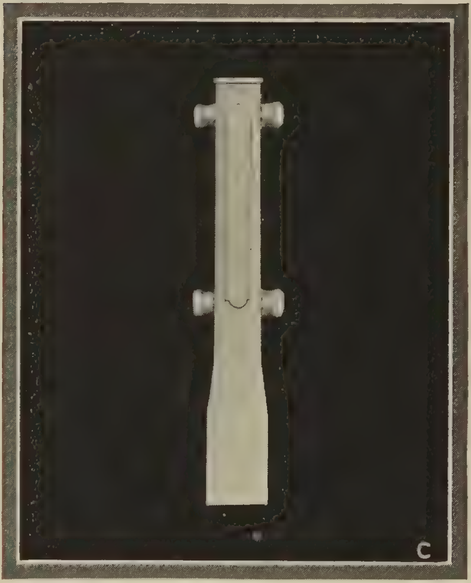


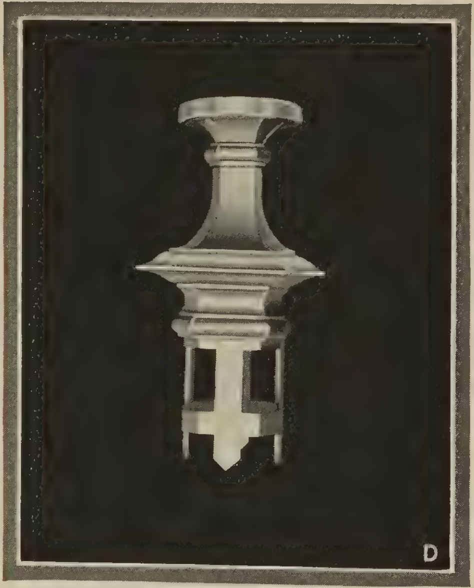
A–Cast aluminum light fixture.

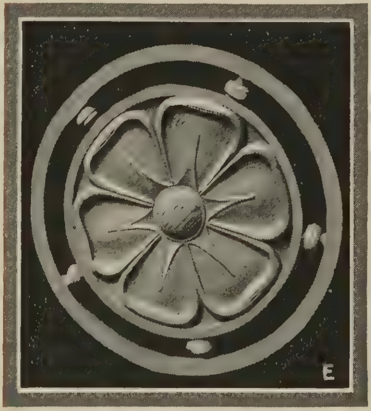
B–Cast aluminum light fixture.

C–Post detail of bridge panel.





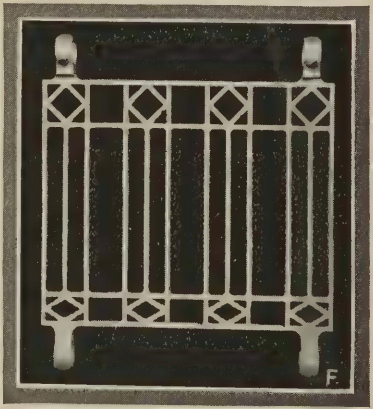




D–Cast aluminum street light standard.

E–Cast aluminum bridge ornament.

F–Cast aluminum bridge panel.



ALUMINUM RIGID CONDUIT FOR FLOODLIGHT SYSTEMS

For use in erecting the floodlighting systems that illuminate the facades of beautiful buildings, Aluminum Rigid Conduit has many advantages.

It does not form the colored salts which, when dissolved by the rain, are washed and blown onto adjacent surfaces, staining and streaking them. Staining is extremely noticeable on stucco; terra cotta, stone, and light-colored brick walls. Stains spoil the beauty of structures.

Defies Corrosion
Is Light in Weight—Strong

Aluminum Rigid Conduit is practically impervious to all normal corrosive influences—hence it will prove as enduring as the building on which it is placed. It bears the Underwriters' stamp of approval.

It weighs only about one-third as much as steel. It has adequate strength for all electrical work.

Description of Aluminum Conduit

Aluminum Rigid Conduit is manufactured from a drawn seamless tubing of an aluminum manganese alloy with mechanical properties higher than those of commercially pure aluminum, but with equal resistance to corrosion. The tensile strength of this alloy is 21,000 to 26,000 lbs. per square inch.

Aluminum Rigid Conduit is manufactured in standard iron pipe sizes, and its dimensions are identical with those of steel conduit. Manufacturers of cast conduit fittings now furnish their entire lines in aluminum.

It is furnished in ten-foot lengths, and is enameled inside to conform with standard practice in manufacturing electrical conduit. It has threads of standard size on both ends and a coupling on one end. The threads on the end opposite the coupling are protected from possible damage.

Aluminum Rigid Conduit can be furnished in lengths up to 48 feet, enameled as above described, for applications requiring seamless or jointless runs.

It can be fitted and installed with the same tools and in the same manner as steel conduit.

Aluminum straps are available for its installation.

Upper stories of Niels-Esperson Building, Houston, Texas—one of the many buildings whose illumination system is constructed of aluminum rigid conduit.

Conduit Book Available

Recommendations for working Aluminum Rigid Conduit will be found in our booklet, "Aluminum Rigid Conduit," a copy of which will be mailed on request.

"TOP-DOWN" ALUMINUM SHINGLES—

A NEW IDEA IN ROOFING

"TOP-DOWN" Aluminum Shingles possess the unique advantage of being laid from the top, down. Start at the ridge and finish at the eaves. No scaffolding is laid over "Top-Down" Aluminum Shingles. Nails are never driven through their exposed surfaces. No "courses" or units need be left out for the scaffolding and laid after it is removed.

In other words, the application of "Top-Down" Aluminum Shingles is as mechanically perfect and as scientifically correct as the water-tight construction of their joints.

Beautiful—Will Not Burn—Light

"Top-Down" Aluminum Shingles combine beauty, permanence, excellence of construction, and absolute wind-, water-, and weather-tightness.

They come in a variety of attractive colors: light green, dark green, gray and terra cotta red. The shingles may be had also in the natural aluminum color — a pleasing silvery gray. All the colors, through weathering and oxidation, become more beautiful as time goes on. Aluminum Shingles never need to be repainted, because aluminum is a non-rusting metal.

Top-Down Shingles are non-inflammable. They are unbreakable. They are light —weighing just a fraction of what other roofing materials weigh. The following table affords an interesting basis for comparison of the relative weights:

Material	Weight per 100 Sq. Feet Laid
Shingle Tile	1200-1800 lbs.
Spanish Tile	650-850 lbs.
Slate	600-1200 lbs.
Felt and Gravel (or slag)	400-625 lbs.
Asbestos Shingles	300-650 lbs.
Hard Lead Sheets	210-325 lbs.
Wood Shingles	200-300 lbs.
20 ga. Galvanized Iron (Corrugated)	225 lbs.
Asphalt Slate-faced shingles	150-400 lbs.
Copper Shingles, 16 oz., .020 Thickness	170 lbs.
Tin	75 lbs.
Aluminum Shingles, 24 ga., .020 Thickness	56 lbs.

Saving in weight is a tremendous advantage, for it reduces the strain to which roof framing timbers are subjected. This enables the architect to design lighter, less expensive roof-supporting structures. Aluminum possesses an advantage here unapproached by any other material of equal bulk and sturdiness.

You should investigate the advantages of this modern, beautiful, enduring roof. The booklet, " 'Top-Down' Aluminum Shingles" will be sent on request.

ENTIRE ROOF OF ALUMINUM

FLASHINGS, GUTTERS, DOWNSPOUTS AND NAILS

EVERY TYPE of shingle accessory—side finishing pieces, eaves finishes, formed valley sheets, valley flashings, ridge flashings, ridge covers, hip covers, gutters, rain conductors, flashing sheets, nails (non-rusting) are made of aluminum.

These accessories are mechanically perfect. They are non-rusting; they defy corrosion; retain their full strength as long as a building lasts.

Sheets of aluminum have been exposed to the ravages of the elements for over twenty-five years without any noticeable deterioration.

The cap on the top of Washington Monument, which is as good and sound now as it was when placed there almost fifty years ago, is another proof of the enduring quality of aluminum. The condition of the casting taken from the Frick Building for examination is another. Numerous other examples could be mentioned.

Aluminum, being a metal, is, of course, non-inflammable. But it is more than "fire-resistant"—it *cannot* burn. The person whose home is covered with aluminum is certainly safe from the fire hazard.

An all-aluminum roof is rain-proof, wind-proof, weather-proof. The correct mechanical construction of "Top-Down" shingles and accessories scientifically prevents leaks. An all-aluminum roof has no points of vulnerability to the elements.

On the side of economy, an all-aluminum roof or aluminum accessories lead all high-grade roofing materials comparable in cost and quality. The first cost is the last, for aluminum needs practically no upkeep. There is no wasteful rusting out of gutters and down-spouts and never any shingles to be replaced. The first cost of an all-aluminum roof or aluminum accessories is extremely moderate for such enduring protection.

In an all-aluminum roof a saving is effected in the cost of application because of the unique "Top-Down" method of applying, for it is done more quickly and with less labor.

Saving and long lasting service are present wherever aluminum is used, and it is always cheaper in the end because it is paid for only once.

Aluminum is a metal that will endure; a metal that will protect as long as it lasts. It is the modern wonder metal that combines strength, lightness, and permanence.

Every architect should investigate the exclusive advantages of an all-aluminum roof.

ALUMINUM COMPANY OF AMERICA

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Boston, Mass.	20 Providence Street, Park Square
Buffalo, N. Y.	1880 Elmwood Avenue
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